

DUPLEX DROP ON DEMAND PRINTING MODULE

The duplex drop on demand (DoD) printing module prints full color images, text, logos and monochrome text, bar codes, and other elements using UV-curable ink technology. It is capable of printing on both sides of the card in one pass.

- UV-curable ink technology delivers high-quality 600 dpi native resolution; effective resolution up to 1,200 dpi resulting in durable color personalization
- Extend card life with varnish printing or UV-fluorescing options to provide abrasion and chemical protection
- Add a level 2 security feature to card designs with UV-fluorescing inks
- Apply varnish as a spot coverage in any shape or size for added security and flexibility
- Highly accurate card handling design helps enable card tracking and data integrity
- Automated maintenance procedures
- Contains complete ink system within the module to reduce floor space versus traditional DoD systems
- Patented ink cartridges keyed to ensure accurate ink supply loading

Duplex Drop on Demand (DoD) Printing Module Specifications

Module Functionality	Prints and cures full-color text, images, logos and monochrome text, bar codes, and other elements on cards
Printing Technology	Specially formulated fast UV-curing inkjet printing technology
Resolution	Native: 600 dpi CMYK, 360 dpi White, Varnish, and UV-Fluorescing Effective: Up to 1,200 dpi for CMYK, up to 720 dpi for White, Varnish, and UV-Fluorescing
Text Formats	Scalable fonts, including TrueType and Open Type fonts for Microsoft® Windows® operating systems
Bar Code Formats	One-dimensional (1D): Code 39, Extended Code 39, HIBC, Codabar, NW7, EAN8, EAN13, JAN8, JAN13, UPCA, UPCE, Bookland, Interleaved 2 of 5, Code 128, EAN/UCC 128, Code 93, MSI Plessey Two-dimensional (2D): QR, PDF417, Data Matrix
Image Formats	Certain versions or features of the following image formats may be supported: BMP, DCP, DPEG (Datacard® 9000 color image format), GIF 87, GIF 89, JPEG, JPEG 2000, PCX, PNG, TGA, and TIF; for additional information, see Card Design Guide for DoD Printing
Card Protection Technology	UV-curable varnish ink for card durability and additional security elements on cards
Print Placement	<ul style="list-style-type: none"> • Edge-to-edge printing requires Overspray Trays are installed in the module • Edge-to-edge printing of white ink requires controller software v10.5 or higher; otherwise white ink prints near edge 0.05 in. (1.27 mm) from card edge
Intelligent Supplies Technology™	Duplex DoD Printing Module requires the exclusive use of Entrust Certified Supplies featuring patented Intelligent Supplies Technology™. Features include: <ul style="list-style-type: none"> • Automatic supply recognition • Automated energy/temperature and module settings
Operator Notifications	<ul style="list-style-type: none"> • Ink supply low • Ink supply out • Ink supply not loaded or recognized • Ink supply load prompt • Ink supply life • Plasma pretreat tip life • Plasma rod life • Edge-to-edge tray presence • Pinning tray presence
Inks Available	Cyan, Magenta, Yellow, Black, White, Varnish, and UV-Fluorescing Red, Green, or Blue
Compressed Air Supply	Range between 5-6 bar positive air, clean, and dry per ISO 8573-1:2010 [1:7:2]. Recommended flow rate of 2CFM (120CF/hr)
Ventilation Requirements	Preferred method is customer-provided external venting and filtration solution within its facility. The MX System is designed and tested to meet U.S. OSHA regulations. Customer is responsible for compliance with local regulations that may contain more stringent requirements for filtration and venting. Where more stringent requirements apply, customer-provided external venting and filtration solution may be the only suitable option for the customer to meet compliance obligations. <ul style="list-style-type: none"> • Airflow for ventilation across the MX System needs to be >10 turns per hour at the base of the Duplex DoD Printing Module • Airflow requirements to pull >150 cubic feet per minute (CFM) • A secondary option is the Fume Extraction System
Card Types Supported	<ul style="list-style-type: none"> • ISO/IEC 7810 ID-1 Size: 30 mil (±10%), alternative card thicknesses can be made available upon request • Fully compatible with contact and contactless smart cards • DoD full card printing is designed for flat card application
Card Materials Supported	<ul style="list-style-type: none"> • Untreated card surface energy needs to be 35.0± 7.0 dyne as calculated per the water contact angle for all card substrates • Materials such as PETG and PVC varnished cards must be tested for compatibility

Fume Extraction System Gen 2 Specifications

Module Functionality	Removes fumes produced when utilizing drop on demand (DoD) printing technology
Configurations	<ul style="list-style-type: none"> The Fume Extraction System Gen 2 for DoD printing comes with a connection kit that supports the 3 ventilation ports on the back of the Duplex DoD Printing Module Recommend all hoses are positioned as straight as possible behind the Duplex DoD Printing Module
Dimensions	46.49 in. H x 20.78 in. W x 18.30 in. D (118.1 cm H x 52.8 cm W x 46.5 cm D)
Weight	156 lbs (70.0 kg)
Voltage	230V +/- 10% (May be powered from the Duplex DoD Printing Module or from a wall outlet)
Max Flow Rate	467 m ³ /hour
Wattage	1.3 kW
Frequency	50 Hz /60 Hz

For replacement filters, refer to the Fume Extraction System Gen 2 data sheet.

Duplex Drop on Demand (DoD) Printing Module Supported Systems

Available Systems	MX9100™ System	MX8100™ System	MX6100™ System	MX2100™ System	
Rated Speed	Not Available	<ul style="list-style-type: none"> Up to 3,000 CPH in Simplex mode Up to 2,000 CPH in Duplex mode (Actual throughput dependent on system configuration) 	<ul style="list-style-type: none"> Up to 1,800 CPH in Simplex mode Up to 1,800 CPH in Duplex mode (Actual throughput dependent on system configuration) 	<ul style="list-style-type: none"> Up to 1,200 CPH in Simplex mode Up to 1,200 CPH in Duplex mode (Actual throughput dependent on system configuration) 	
Allowed Quantity		Up to 2 modules per system		Up to 1 module per system	
Module Configurations		<ul style="list-style-type: none"> Module includes plasma treatment unit, printheads, UV-curing station, and integrated card buffer, flipper Three standard configurations available: Monochrome (2 printheads) Black/White, Color (4 printheads) CMYK, and Color (3 printheads) CMY Optional printheads include: Varnish—for both base modules, White—for Color base module, CMY—for Monochrome base module, and UV-Fluorescing Red, Green, or Blue to be used in place of Varnish Card buffer at the end of module holds 4 cards in wheel configuration 			
System Considerations		<ul style="list-style-type: none"> Module applies printing to the front side of the card, if back side printing is required the card will flip in the integrated card flipper and return via the top track to be inserted back into the front of the module for additional printing Duplex DoD Printing Module should come before Artista® VHD Retransfer Color Printing Gen 2, Durable Graphics Printing, or Embossing Modules when using these technologies on opposite sides of the same card Module requires Controller Software v10.4 or higher when added to a system already in the field Module requires Controller Software V10.9 or higher when adding a UV-Fluorescing Red, Green, or Blue printhead in a field module. If Varnish printhead is already in the system, talk to your sales consultant for UV-fluorescing printing options. 			
Module Dimensions		50.1 in. H x 90.0 in. W x 27.0 in. D (127.3 cm x 228.6 cm x 68.6 cm) Note: First 10 in. have an extra 14 in. (25.4 cm) in depth			
Weight		1,397 lbs (633.7 kg)			
Current Draw		11.50 Amps at 230V (Fume Extraction unit powered on its own circuit) 18.50 Amps at 230V (Fume Extraction unit powered from the MX System)			
Heat Output	Average of 9,024 BTUs per hour				

Duplex Drop on Demand (DoD) Printing Module Supplies Featuring patented Intelligent Supplies Technology™

Item Number	Description	Yield/Roll (approx.)
515520-001	Cyan Ink Cartridge 1 liter	Varies
515520-002	Magenta Ink Cartridge 1 liter	Varies
515520-003	Yellow Ink Cartridge 1 liter	Varies
515520-004	Black Ink Cartridge 1 liter	Varies
515520-007	White Ink Cartridge 1 liter	Varies
515520-020	Varnish Ink Cartridge 1 liter	Varies
515520-030	UVF Red Cartridge	Varies
515520-031	UVF Green Cartridge	Varies
515520-032	UVF Blue Cartridge	Varies
515520-092	System Flush Cartridge	Varies
515520-093	UVF Flush Cartridge	Varies
812134-023	Cleaning Wipe, Lint Free 50/pack	50 Uses
812489-001	Bottle, Waste, 1 Gallon	N/A
523447-998	Replacement Printhead Kit - CMYK	N/A
523447-999	Replacement Printhead Kit - White or Varnish	N/A
525376-001	Edge-to-Edge Overspray Tray Kit (10 trays/kit)	15,000 uses or 30 days from first use
529913-001	Pinning Tray Package (8 trays/package)	3 Months

The Duplex DoD Printing Module requires the exclusive use of Entrust Certified Supplies featuring patented Intelligent Supplies Technology™.

 [Learn more about the MX Series at entrust.com](https://www.entrust.com)



Global Headquarters
1187 Park Place, Minneapolis, MN 55379
U.S. Toll-Free Phone: 888 690 2424
International Phone: +1 952 933 1223